CLAIMS

1. A floor-cleaning machine comprising, in combination:

a chassis, with the chassis being mobile on a surface;

an agitating mechanism carried by the chassis and which engages the surface;

a reservoir carried by the chassis and adapted to receive and contain a fluid;

a fluid delivery system that conveys the fluid from the reservoir to the surface proximate the agitating mechanism, with the fluid delivery system including a flow control valve, with the flow control valve having a body and a flow control member contained within the body, with the flow control member rotatable within the body about an axis;

an upstream duct and a downstream duct defined interior the body of the flow control valve, with the flow control member intermediate the upstream duct and the downstream duct, with the upstream duct receiving the fluid into the body of the flow control valve and with the downstream duct discharging the fluid from the body of the flow control valve;

the flow control member having a first position defining a first passage intermediate the upstream duct and the downstream duct, with the first passage having an entrance and an exit, with the first passage having a cross sectional area generally parallel the axis; and

the flow control member having a second position defining a second passage intermediate the upstream duct and the downstream duct, with the second passage having an entrance and an exit, with the second passage having a cross sectional area generally parallel the axis and smaller than the cross sectional area of the first passage, with the flow control member pivotable between a low flow position and a high flow position and governing fluid flow between the upstream duct and the downstream duct, with the entrance to the first passage being in communication with the upstream duct and the exit of the first passage

being in communication with the downstream duct in the high flow position and allowing fluid flow from the upstream duct to the downstream duct through the first passage, with the entrance to the second passage being in communication with the upstream duct and the exit of the second passage being in communication with the downstream duct in the low flow position and allowing fluid flow from the upstream duct to the downstream duct through the second passage, with a fluid flow rate through the second passage of the flow control valve being less in the low flow position than a fluid flow rate through the first passage of the flow control valve in the high flow position, with the fluid flow rates in the low flow position and the high flow position each being distinct and repeatable with adjustment of the flow control member between the low flow position and the high flow position.

2. The floor-cleaning machine of claim 1 further comprising, in combination: a filter in the fluid delivery system, with the filter intermediate the reservoir and the flow control valve.

3. The floor-cleaning machine of claim 2 further comprising, in combination: an operating valve in the fluid delivery system, with the operating valve intermediate the reservoir and the filter, with the operating valve effecting starting and stopping of fluid flow out of the reservoir to facilitate filter changes and being variable to provide operator adjustment of fluid flow up to the fluid flow rate allowed by positioning of the flow control valve.

4. The floor-cleaning machine of claim 1 further comprising, in combination: an electric solenoid valve in the fluid delivery system intermediate the flow control valve and the agitating mechanism, with the electric solenoid valve controlling fluid delivery to the surface.

5. The floor-cleaning machine of claim 1 further comprising, in combination: a recovery system for soiled fluid including a squeegee, and a recovery fluid reservoir in which the soiled fluid is received and held until disposal, with the recovery fluid reservoir being under vacuum to remove the soiled fluid from the surface.

6. The floor-cleaning machine of claim 5 with the fluid delivery system further comprising, in combination:

a filter intermediate the reservoir and the flow control valve;

an operating valve intermediate the reservoir and the filter, with the operating valve effecting starting and stopping of fluid flow out of the reservoir to facilitate filter changes and being variable to provide operator adjustment of fluid flow up to the fluid flow rate allowed by positioning of the flow control valve; and

an electric solenoid valve intermediate the flow control valve and the agitating mechanism, with the electric solenoid valve controlling fluid delivery to the surface.

7. The floor-cleaning machine of claim 6 with the flow control valve formed of plastic and the upstream and downstream ducts being adapted to connect to tubing.

8. The floor-cleaning machine of claim 7 with the ball of the flow control valve pivotally adjustable to a plurality of positions intermediate the high flow and the low flow positions, with the entrance to the first passage being at a distance from the entrance to the second passage, with the distance being greater than a diameter of the upstream duct, with the ball being pivotable to a position where the upstream duct is not in communication with the entrance to the first passage and not in communication with the entrance to the second passage to impede fluid flow from the upstream duct to the downstream duct.

9. The floor-cleaning machine of claim 8 further comprising, in combination: a lever to rotate the ball between the low flow position and the high flow position, with the lever being elongated and having a first end and a second end, with the first end connected to the axis of the ball, with the second end pivotable about the first end to cause rotation of the ball.

10. A flow control valve comprising, in combination:

a body and a flow control member contained within the body, with the flow control member rotatable within the body about an axis;

an upstream duct and a downstream duct defined interior the body, with the flow control member intermediate the upstream duct and the downstream duct, with the upstream duct receiving the fluid into the body and with the downstream duct discharging the fluid from the body;

the flow control member having a first position defining a first passage intermediate the upstream duct and the downstream duct, with the first passage having an entrance and an exit, with the first passage having a cross sectional area generally parallel the axis; and

the flow control member having a second position defining a second passage intermediate the upstream duct and the downstream duct, with the second passage having an entrance and an exit, with the second passage having a cross sectional area generally parallel the axis and smaller than the cross sectional area of the first passage, with the flow control member pivotable between a low flow position and a high flow position and governing fluid flow between the upstream duct and the downstream duct, with the entrance to the first passage being in communication with the upstream duct and the exit of the first passage being in communication with the downstream duct in the high flow position and allowing

fluid flow from the upstream duct to the downstream duct through the first passage, with the entrance to the second passage being in communication with the upstream duct and the exit of the second passage being in communication with the downstream duct in the low flow position and allowing fluid flow from the upstream duct to the downstream duct through the second passage, with a fluid flow rate through the second passage of the flow control valve being less in the low flow position than a fluid flow rate through the first passage of the flow control valve in the high flow position, with the fluid flow rates in the low flow position and the high flow position each being distinct and repeatable with adjustment of the ball between the low flow position and the high flow position.

11. The flow control valve of claim 10 with the flow control member pivotally adjustable to a plurality of positions intermediate the high flow and the low flow positions.

12. The flow control valve of claim 10 with the flow control member being a ball, with the first and second passages defined in the ball, with the entrance of the second passage being distinct from the entrance of the first passage.

13. The flow control valve of claim 12 with the entrance to the first passage being at a distance from the entrance to the second passage, with the distance being greater than a diameter of the upstream duct, with the ball being pivotable to a position where the upstream duct is not in communication with the entrance to the first passage and not in communication with the entrance to the second passage to impede fluid flow from the upstream duct to the downstream duct.

14. The flow control valve of claim 12 with the first passage being oriented at an angle in the range of 65 to 75 degrees to the second passage.

15. The flow control valve of claim 12 with the first and second passages being linear and diametric to the ball, with the first passage and the second passage being in communication at an intersection.

16. The flow control valve of claim 12 with the cross sectional areas of the first and second passage being generally circular.

17. The flow control valve of claim 12 with the exit of the second passage being distinct from the exit of the first passage.

18. The flow control valve of claim 10 further comprising, in combination: an actuator to rotate the flow control member between the low flow position and the high flow position.

19. The flow control valve of claim 18 with the actuator being a lever, with the lever being elongated and having a first end and a second end, with the first end connected to the axis of the flow control member, with the second end pivotable about the first end to cause rotation of the flow control member.

20. The flow control valve of claim 10 with the upstream and downstream ducts being adapted to connect to tubing.